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**FOR**  
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1933  
1934  
1935  
1936  
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1934



A

Accidents . . . . .	5
Administration. . . . .	5
Animals. . . . .	13
Anniversary - Golden Wedding (Riley). . . .	5
Appropriations. . . . .	5
Auto Treks, Lectures, Guided Trips. . . . .	10

B

Bathhouse Operations.....	4 - 22
Bears, Black. . . . .	13
Bears, Grizzly. . . . .	13
Beer and Wine, Sale of. . . . .	5
Boat Company, Yellowstone Park. . . . .	23
Buffalo Ranch Activities. . . . .	12
Building Maintenance and Construction . .	19
Bureau of Public Roads. . . . .	23
Business and Professional Women's Clubs. .	1

C

Camps Company, Yellowstone Park . . . . .	22
Civilian Conservation Corps. . . . .	20
Civil Service. . . . .	4
Civil Works Program. . . . .	21
Cooperating Bureaus. . . . .	23
Bureau of Public Roads. . . . .	23
Post Office. . . . .	23
Weather Bureau . . . . .	23

D

Deaths . . . . .	26
------------------	----

E

Electrical Department . . . . .	18
Emergency Conservation Work . . . . .	20
Emergency Construction . . . . .	16
Engineering Department . . . . .	15



## F

Fire Protection . . . . .	12
Fishing Season . . . . .	3
Fish Planting . . . . .	14
Forestry . . . . .	11
Fuel Company, Yellowstone Park. . . . .	23

## G

General . . . . .	1
Guided Trips, Lectures, Etc . . . . .	10

## H

Hamilton, C. A. . . . .	22
Haynes Picture Shops, Inc. . . . .	22
Hay Ranches . . . . .	12
Highways, Improvement of . . . . .	4
Hotel Company, Yellowstone Park. . . . .	22

## I

Improvement of Highways . . . . .	4
Insect Control . . . . .	11

## L

Labor Situation . . . . .	3
Lectures, Auto Treks, Guided Trips . . . . .	10

## M

Mechanical Department . . . . .	19
Miscellaneous . . . . .	26

## N

Naturalist Department . . . . .	8
---------------------------------	---

## O

Office of National Parks, Buildings and Reservations . . . . .	3
Old Faithful Swimming Pool . . . . .	4
Opening of Park . . . . .	1





P

Park Operators . . . . .	22
Personnel . . . . .	5
Personnel, Naturalist Department . . . . .	8
Personnel, Protection Department . . . . .	10
Pi Beta Phi Sorority . . . . .	1
Post Office . . . . .	23
Predatory Animals . . . . .	13
Protection Department. . . . .	10
Protection Department, Summer Activities . . . . .	10
Protection Department, Winter Activities . . . . .	10
Pryor and Trischman . . . . .	22
Public Works Program . . . . .	16

R

Revenues . . . . .	6
Road Conditions. . . . .	4

S

Sanitation Department . . . . .	17
Swimming Pool, Old Faithful . . . . .	4

T

Temporary Status of Employees . . . . .	3
Trail Construction and Maintenance . . . . .	12
Travel . . . . .	6

U

U. S. Public Health Service (Sanitation). . . . .	17
---	----

V

Visitors . . . . .	26
Vital Statistics . . . . .	26

W

Waterfowl . . . . .	14
Weather Bureau . . . . .	24
Wildlife in Park . . . . .	13
Wine and Beer, Sale of . . . . .	5



Y

Yellowstone Park Boat Company . . . . .	23
Yellowstone Park Fuel Company . . . . .	23
Yellowstone Park Hotel Company . . . . .	22
Yellowstone Park Lodge and Camps Company . . .	22
Yellowstone Park Transportation Company . . . .	23

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# ANNUAL REPORT FOR YELLOWSTONE NATIONAL PARK

1934

Roger W. Toll, Superintendent

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## GENERAL

In previous years the reports of the Superintendent have covered the construction season and included the period from October 1 to November 30. Office Order No. 274 from our Washington office provides that the annual report for 1934 cover the period from October 1, 1933 to June 30, 1934, inclusive, the end of the fiscal year. This change therefore preclude a comparison of travel for one season as compared with another and will include the period to June 30 only. It will eliminate the activities for the most of the 1934 season but such information will be carried in the annual report for 1935.

The sixty-second season of the park officially opened to motorists on April 1, when the north, west and east gates began admitting cars and charging the \$3.00 entrance fee. Because of the very mild winter with little snowfall it was possible to clear the park highways of snow earlier than in previous years, some of which were open before the first of April. The south gate was cleared on April 21, the earliest in park history. Travel via the south gate was not permitted until May 9. Motorists were admitted via the east gate on April 29 which was considerably earlier than previous years.

The early opening of the roads naturally resulted in an increase in travel. The travel to the end of May showed an increase of 122% over the percentage of increase to the close of the fiscal year 1933. Designated by Secretary of the Interior Ickes as "National Travel Year" much excellent publicity was secured during the winter and spring months and the travel to the park has proven conclusively that the people of the country have again become park conscious. No one could have dared to predict such a large percentage of increase as was shown at the end of the fiscal year. If the travel continues as it has during the earlier part of the season the 1934 travel year should break the record of 1929 and exceed the travel of any other year. The increase in visitors was reflected in the rail travel as well as in automobile travel, which has been very beneficial to the Transportation, Hotel and Lodge Companies, as well as the other park operations and the railroads serving the park. The railroads have made very attractive rates for summer travel to the West, which perhaps has been most responsible for the increase in travel to the park by rail. Social conventions, including the Pi Beta Phi Sorority, and the Business and Professional Women's clubs aided in boosting the rail figures. To the end of June 1415 rail visitors entered the park as against 521 on the same date last year. The total travel to June 30 was 60,090 as against 33,306 in 1933.

The large increase in travel naturally had its effect on the business of the operators and all operations were reporting a considerable increase over last year. The Hamilton Store at Old Faithful began taking care of visitors on April 10. The house counts at the hotels and lodges were considerably in excess of last year, while the transportation line, the general stores, cafeterias, gasoline filling stations, picture shops and fuel yards showed a marked increase in business up to the end of the fiscal year.

The winter was the mildest that has been recorded in the park, and the snowfall was very light. Not one day was lost by CWA workers during the winter and spring months and it was possible to carry on this work without interruption. The month of May broke all May records for heat and dryness and the seven months from October to April all recorded temperatures above normal. Never before in the years of record, since 1887, was there an unbroken succession of these seven months with the temperature of each above normal. Following the dry weather in May, June set a new record for rainfall for that month, being the wettest June recorded since the establishment of the Weather Bureau in the park. This precipitation resulted in beautifying the park and aided materially the depleted condition of the range. The wet weather delayed travel somewhat on some of the roads under construction in the park but few complaints resulted.

The fishing season opened on May 26 and immediately excellent catches were reported by visitors leaving the various gateways. The low water in the park streams and lakes improved fishing conditions throughout the park. A check of visitors leaving the park showed 36,427 fish caught to June 30 as against 18,394 to the same date last year.



Lake Hotel and Mammoth Hotel remained closed for the season while Lake Lodge was reopened to persons seeking housekeeping accommodations in the Tower Falls area were accommodated at Roosevelt Lodge. Rail visitors were permitted to make the loop trip in  $3\frac{1}{2}$  days as against  $4\frac{1}{2}$  days in former years and the railroads sold park tours on the  $3\frac{1}{2}$  days basis, the rate via the hotels for room without bath being \$45.00 as against \$38.00 for the park trip via the lodges. The housekeeping cabins and cafeterias particularly enjoyed a large increase in business and it is evident that more people are seeking this type of accommodation.

Several small fires were reported up to the end of the fiscal year but the park did not experience any fires of a serious nature. While the dry weather in May presented a fire hazard there was little danger of forest fires in June.

The employment of men on park projects aided materially in reducing unemployment in the adjoining states, particularly in Park County Montana and Park County, Wyoming. With the CWA work under way from December to April it was possible to employ some 200 men from Livingston and Cody on these projects. The early spring permitted the contractors to get to work on their projects much sooner than would have been possible in ordinary years and many men found employment with these contractors. Likewise the ECW activities with the reestablishment of four camps which operated last year and two additional camps, provided employment for a number of local people. The decrease in the hours of labor under the operators code caused the increasing of their forces which provided additional employment. This increase in employment has had a very favorable effect on the business in the neighboring towns and the large increase in park travel has also been reflected in tourists business in the adjoining states, especially in cities and towns on the main highways leading to and from the park.

The excellent weather of September, October and November permitted persons to visit the park until a late date and accommodations were available at the Hamilton store at Lake until October 10 while the Old Faithful store took care of late visitors until November 5. There were very few storms to hinder travel and all of the road were open during November.

On October 1, 1933 all permanent employees were placed on a temporary status and all annual and sick leave was withdrawn. On November 1, 1933 all leave privileges were restored and the permanent personnel reappointed. On February 1, 1934 the legislative deduction of 15% on July 1, 1934. On March 2, 1934 President Roosevelt signed the Interior Department Appropriation Bill which provided, among other things, for the restoration of the name "National Park Service" to replace the name "Office of National Parks, Buildings, and Reservations," which was adopted last August.

The placing of all employees excepting common laborers, temporary rangers, and ranger naturalists under Civil Service is working very satisfactorily except in some cases there has been considerable delay in getting the men to report at the time the work opens. The furloughing of employees at the end of the working season permits employing them the next season without regard to their standing in the register. This is working very satisfactorily once the employees are selected for the various positions. All truck drivers were employed from the registers for the first time this year, registers being available last year for most of the other skilled positions.

Many compliments were received regarding the marked improvement in the park highways. While travel was delayed some because of construction work under way, within two or three years the granddaddy highway in the Yellowstone as well as the entrance roads leading to it will be more modern standards and comparable to any of the highways found in the surrounding states. The improvement of the highways to Gold Gate received much favorable comment from park visitors. There is now a high gear road from Mammoth to Old Faithful with gravel surface from Mammoth to Obsidian Cliff and a permanent oil surface from Obsidian Cliff to Firehole Cascades. The section from Firehole Cascades to Old Faithful has been let for grading. On the east side of the Park construction work is under way on the section from Canyon to Bridge Bay and from Arnica Creek to the south entrance. The section from Canyon to Mammoth, via Dunraven Pass and Tower Falls has been practically all graded or graveled and the remaining portion is under construction. The stretch from Lake Butte to Lake Junction on the east entrance road is under construction. A contract has been let and work is under way on a section of the Tower Falls-Cooke section from Soda Butte to Cooke.

Mr. C. A. Hamilton, who took over the bathhouse operations from H. P. Brothers at Old Faithful and Fishing Bridge on June 20, 1931, began remodeling his Old Faithful swimming pool last fall and completed the work during the spring so that it was operating when the park officially opened. This swimming pool has proven quite popular during the warm summer days. It is closed and has a glass top.

Despite the fact that the season was advanced this year, our visitors were rewarded by seeing much park game. Moose were in evidence almost daily in Willow Park while the antelope were seen at Gardiner and between Gardiner and Mammoth. A band of mountain sheep frequented the Mt. Washburn region. The bears, although somewhat late in making their appearance, were seen in the various park areas. The construction of a new road into the bear feeding grounds at Canyon delayed them from making their appearance nightly for the first time from the dining rooms of the hotels and lodges. As soon as the road permitted travel the show went on and each night there was a fine play of grizzly bears. Following the opening of the hotel and lodge at Old Faithful the bear show at that point was put on nightly at the bear feeding grounds with a large attendance for most of the performances. Measures to rid the park of bad bears had had its effect.



lessening the bear damages and injuries and comparatively few complaints reached the superintendent's office. No serious personal injuries caused by bears were reported. Many visitors saw deer while one large bull elk at Norris Junction was the subject for numerous still and motion pictures.

The park policy with regard to the sale of beer, wines and liquors remained the same as in force in 1933, namely that the alcoholic content should not exceed 3.2%.

A serious accident, resulting in the death of Carl Johnson of Livingston, Montana occurred on the Mammoth Tower Falls road about  $2\frac{1}{2}$  miles from Tower Falls on October 31, 1933. Six men were riding in a truck belonging to Fred Lindsay, sub-contractor for one of the contractors on the Red Lodge-Cooke road, when the driver lost control and the car went over a bank, turned over twice and half buried itself in the hillside. Mr. Johnson was killed while the other occupants of the car were considerably stunned and bruised.

Mr. and Mrs. William Riley hold the distinction of celebrating the first Gold Wedding Anniversary in Yellowstone Park as far as park records disclose. The Rileys had been married 50 years on March 20, 1934. Mr. Riley has been in the employ of the Park Service since 1919 and retires from active service July 31, 1934.

#### ADMINISTRATION

Personnel: The permanent personnel consists of Roger W. Toll, Superintendent; Guy D. Edwards, Assistant Superintendent; Joseph Joffe, Assistant to the Superintendent; Benjamin A. Hundley, Chief Clerk; Francis W. Watson, Disbursing Clerk; Parke W. Soule, Senior Clerk and Bookkeeper; Verna M. Roe, Clerk-Stenographer; Constance P. Whitney, Clerk-Stenographer; Virginia J. Goettlich, Timekeeper; Keith Neilson, Voucher Clerk; Edwin C. Stevens, Clerk in Chief Ranger's office. At the close of the fiscal year the position made vacant by the resignation of Mary L. Miller, Clerk-Stenographer, had been recommended for filling by the appointment of William H. Katus. This force is augmented during the summer season with two clerk-stenographers, one statistical clerk, one publicity clerk and one card clerk. Also, one stenographer, Jerry P. Tonini, assigned to the superintendent during the winter at his headquarters office in Denver on work in connection with inspection of proposed parks and monuments, is transferred to the park during the summer season. The maximum number of employees on the payroll at one time was 469, consisting of 74 permanent and 395 temporary employees.

Appropriations: Appropriations for the fiscal year 1934 are as follows:

*44433.3	Yellowstone National Park, 1934	\$326,255.00
44406.3	Forest Protection & fire Prevention, 1934	10, 550.00
44405.3	Emergency Reconstruction & Fighting Forest Fires, 1934	7,797.38
4x409	Extension, Winter Feed Facilities, Game Animals, Yellowstone National Park	3, 250.50
4x436	Roads and Trails, National Parks	123,730.60
43436.1	Roads and Trails, National Parks, Emergency Construction, 1933	194,723.70
4-03-5640.8	National Industrial Recovery, Interior, National Parks, Roads & Trails, 1933-1935	
40-35640.14	National Industrial Recovery, Interior, National Parks, Buildings & Reservations, 1933-35	262,803.54

\$1,000 reserved for Washington office expenditures and \$138, for unallotted reserve.

\*\*Reverse figure shown since several major obligations and amounts were transferred to other road appropriations.

Revenues for 1934 Fiscal Year: Revenues aggregating \$164,621 were received from the following sources during the fiscal year and deposited in the Treasury of the United States as Miscellaneous Receipts:

Automobile and motorcycle permit fees	\$135,205.00
Franchise and permit fees	25,072.54
Electric current	2,257.40
Water	545.88
Miscellaneous	1,541.23

#### TRAVEL

Due to the unusually mild and early spring the park roads were free of snow much earlier than usual, and the entrance stations were open. The sale of permits started on May 1. Consequently the increase in season travel has brought the travel figures up to 60,070 visitors from October 1, 1933 and June 30, 1934, inclusive, as compared with 33,300 visitors for the same season of a year ago, an increase of 26,764. A comparative study of automobile travel shows that 18,771 motor vehicles entered the park between October 1, 1933 and June 30, 1934, as compared with 10,345 for the same period last year, an increase of 8,426. There has been a total of 1,415 visitors by rail between October 1, 1933 and June 30, 1934, as compared with a total of 521 for the same period last year, an increase of 994. A comparison of rail travel figures for this year and last year is as follows:



Gateway	* 1933-34	1932-33	Increase
North	590	190	400
West	# 581	250	331
East	237	78	159
South	## 7	3	4
Northeast			
TOTAL	1415	521	894

\*Oct. 1 to June 30, inclusive.

#West entrance rail travel for 1933-34 consists of Union Pacific System 518; CMStP&P 58; and Northern Pacific 5.

## Rail travel through the south entrance consists of 3 persons entering via Union Pacific System, through Victor, Idaho, and 4 via Chicago & Northwestern through Lander, Wyoming.

The number of cars and visitors reported in daily counts at designated developed campgrounds for the period, October 1, 1933 to June 30, 1934, inclusive:

Designated Campground	Cars	*Campers
West Yellowstone	66	222
Fishing Bridge	1884	6330
Old Faithful	642	2191
Mammoth	313	1052
Lake	153	514
Canyon	270	891
West Thumb	219	736
Norris Junction	84	282
Madison Junction	141	474
Tower Falls	19	64
TOTAL	3801	12756

Total season travel by entrance gateways between October 1, and June 30, 1934 and 1933

Gateway	Rail visitors	Automobile cars	Motorcycle Pass.	Misc. Vehicles	Misc. Pass.	Misc. foot pack	Pre-season cars	Visitors	TOTAL
1933-34									
North	590	2075	3950	5	6	63	3870	11709	16318
West	581	2309	7007	6	10	23	3588	11011	18632
East	237	794	7203	9	17	3	3575	11547	19007
South	7	63	2474	1	1	10	1080	3150	5642
Northeast			189			3	92	299	491
TOTALS	1415	6545	20823	21	34	102	12205	37716	60090

1932-33

North	190	878	2675	4	6	74	2752	8706	11651
West	250	1404	4575	3	4	22	1859	5912	10763
East	78	1603	4881	2	2	34	1352	4440	9405
South	3	369	1126	2	4	3	117	351	1487
TOTALS	521	4254	13227	11	16	133	6080	19409	33306

## NATURALIST DEPARTMENT

There were several changes in the staff of this department during this period. First, Wilfred Mead, Janitor, was transferred to the Department of Plumbing and Sanitation on October 23 and assigned full time janitor work. Mrs. Herma A. Baggley, Junior Park Naturalist, resigned take effect at the end of the calendar year. She remained on duty until December 16. William E. Kearns, new Junior Park Naturalist, reported to work on May 23. The permanent staff on June 30, 1934 consisted of:

Park Naturalist	C. Max Bauer
Assistant Park Naturalist	George C. Crowe
Junior Park Naturalist	William E. Kearns

The summer staff for June, 1934 included 18 ranger-naturalists, clerk-stenographer and 3 laborers or caretakers for the museums. Three of the ranger-naturalists were designated senior ranger-naturalists to supervise the activities at Fishing Bridge, Old Faithful and Mammoth Hot Springs Museums. All of the museums were closed before the first of October, 1933. The opening dates for the museums are given below:

Mammoth Museum	June 4
Norris Museum	June 16
Madison Museum	June 20
Old Faithful Museum	June 16
Fishing Bridge Museum	June 16

The daily hours for each museum are as follows:

Mammoth Museum	8 AM to 8 PM
Fishing Bridge Museum	8 AM to 8 PM
Norris Museum	8 AM to 5 PM
Madison Museum	8 AM to 5 PM
Old Faithful Museum	8 AM to 9:30 PM

An outside amphitheater for the Mammoth campground is being constructed on the hillside above the camping area. Most of this work is being done by the CCC. In June a small amphitheater with seating capacity for 75 persons, and a fireplace were constructed near the Madison Museum at a point from which National Park Mountain is visible.

Further improvements have been carried on at the headquarters museum. Through cooperation of the CWA the south end of the basement was excavated during the winter and a concrete floor placed in it. This room is for the storage of study collections of skins of birds and animals and the herbarium. It is also to be used for a laboratory where biological and geological work may be carried on by research



workers in Yellowstone.

The preparation of a relief schedule has been arranged so that ranger-naturalists will have regular relief during the summer season amounting to one day a week.

The placement of a ranger-naturalist at Lest Thumb ranger station has greatly improved the work at that point in that there is a daily nature walk to Duck Lake and return, and a well organized camp fire program with naturalist lectures every evening serving from 100 to 150 campers. On the formation walk over the thermal area a more detailed description of the activities there is presented by an experienced geologist.

Special naturalist service was furnished to the various conventions in session in the park.

The pre-season lecture program of the permanent naturalists in the CCC camps offered an educational feature to these men. These lectures were continued with the aid of rangers and ranger-naturalists speaking one night a week in each of the six camps, on educational subjects pertaining to Yellowstone National Park.

The interpretation of natural history of the park by motion pictures was inaugurated.

Members of the naturalist staff cooperated both by consultation and field trips with the Bureau of Public Roads and the park engineers relative to road location in the park.

The research work of Dr. Arthur Howard relative to the geology of Lower Falls region was continued.

The cooperation of the Princeton School of Field Geology was secured in supplying research workers to study problems in Yellowstone National Park.

Monthly observations of the geysers and hot springs have been made throughout the year and information carded.

Activities from October 1 to June 30, inclusive

Station	:Field Trips: :No.: Att. :	Lectures: :No.: Att.:	Museum: :Att. :	Auto Caravans :No.: Cars :	:Sp. Pa: :Att. :No.:
Canyon	: 50:6388 :	14 :2920 :			2:
Fishing Bridge:	13: 124 :	53 :4152 :	6418 :	11: 32:	108 : 2:
Madison	: 4: 57 :	40 :1649 :	2885 :	:	: 1:
Mammoth	: 19: 418 :	133 :14307:	9983 :	15: 172:	575 : :
Mt. Washburn	: : :	: 1720 :		:	: :
Norris	: 37: 889 :	34 :12895:	14608 :	14: 681:	2321 : 8: 43
West Thumb	: 20: 938 :	10 : 472:		; :	: 1:
TOTAL	:171:130374 :	284:38115:	38228 :	40: 885 :	3004 : 14:

TOTAL CONTACTS Oct. 1 to June, 1933

49,000

" " " 1 to " 1934

90,000

PROTECTION DEPARTMENT

General: During the extremely mild winter, conditions were unusually favorable for conducting several special wild life study projects in addition to the regular protection department activities of protection and observation of fauna and other natural features. Considerable time was devoted to planning of work projects and supervision of ECW, CWA, and other activities. Summer activities have been handicapped by the reduction of temporary ranger force in the face of the unexpected increase in travel.

Personnel: The protection department personnel consists of Chief Ranger George F. Baggeley; four assistants chief ranger, Harry Trischler, George W. Miller, Francis D. Lanoue, and Fred T. Johnston; 23 permanent rangers; 27 temporary rangers; one chief buffalo keeper, one assistant buffalo keeper; one buffalo herder and one night watchman, assigned to Mammoth. Assistant Chief Ranger Johnston has been assigned to ECW work in the Washington office since November, 1933. Assistant Chief Ranger LaNoue was assigned to supervision of CWA work at Scotts Bluff National Monument during the winter months.

WINTER ACTIVITIES: The protection department winter activities consisted of the regular patrols for game study and observation, special game study projects, maintenance of telephone lines, removing snow from the roofs of government buildings, waterfowl observation, reading water gauges, measuring snow depths, making weather observations, game feed and predatory animal control. Two permanent rangers were assigned to supervision and planning of CWA activities in the park during the winter months. Some time was spent on the preparation and completion of plans for ECW projects and forestry projects for the summer.

Summer Activities: Summer activities consisted of law enforcement, contacting and entertaining special visitors, information service to



public, checking traffic at entrance stations, fire prevention and contr l, construction and maintenance of trails, preparing and maintaining snowshoe cabins, and supervision of ECW projects. The reduced number of temporary rangers, with the heavy increase in travel and early fire season, has retarded summer activities considerably. CCC enrollees, detailed under ECW supervision, have been employed from trail maintenance, fire patrol, forest cleanup and other such general protection duties as they may be sued for.

### Forestry:

Insect Control: During the spring of 1934, two insect control projects were in progress in the park. Roadside Ips control work was started in April and completed in the middle of May. Mountain pine beetle insect control in the Mt. Washburn section of the park was carried on during May and June and upon completion practically all of the infested area in and adjacent to this scenic area had been treated.

The roadside Ips control project was carried on between Obsidian Cliff and Madison Junction and all infested trees within 150 feet of each side of the road were treated. Public Works funds were used and \$1278 was expended in treating 10,244 trees.

The mountain pine beetle control project on Mt. Washburn covered 5,127 acres and 2,684 infested trees were treated by felling and burning methods. Public Works and regular insect appropriations were used, approximately \$7,000 being expended from the two sources, CCC labor was also used on this project. Three camps were established in order to carry on the work and two of these camps were off the highways and rationed by pack string. It is thought that the infestation in the area covered has been reduced at least to a normal stage. Included in the area treated this season were 728 acres of infested forest that only one or two new attacks were present where in 1933 there were 20 to 30 attacks. On the east side of Mt. Washburn, 138 acres of heavily infested forest was not treated due to lack of funds and lateness of the season. A heavily infested area to the West of the Washburn unit was discovered during the control operations and could not be included in the program.

Forestry and fire protection work had gone forward under the ECW program. Such work as forest cleanup, campground planting and reconstruction, roadside cleanup, motorway, trail, boat docks, telephone line and bridge construction have been started.

The field data collected during the summer of 1933 by the type mapping crews was compiled and tracings of the field maps were made during the winter. This completes two thirds of the type map of Yellowstone Park. Since no funds were available for type-mapping work in the spring of 1934 no work has been started.

Fire Protection: The extremely light winter together with the driest May on record created a serious fire hazard two months ahead of the usual time. Nine fires occurred prior to June 30, six having been caused by lightning and the rest were man-caused. All of these fires were small, being either in Classes A. or B.

Early in the season the six CCC camps were organized for fire emergencies. Lectures and instructions were given and each camp was organized into a flying squadron of 50 men and two 40 men follow-up crews. A section of the flying squadron was given fire fighting instruction each week by the camp fire chief. Twenty-nine CCC men were selected from the different camps and were stationed at the various ranger stations and snowshoe cabins as smoke chasers.

TRAIL CONSTRUCTION AND MAINTENANCE: Trail crews of one and two men were employed during the early season to clear down timber from the Howard Eaton and lead-in trails. Such crews were used only when the distance from camp prohibited the use of CCC men. For the most part, trail repairs and maintenance have been handled by CCC labor. Thirty miles of trail improvement and seven miles of new trail construction was handled as Public Works and CWE projects.

Buffalo Ranch Activities: A buffalo management plan for the Yellowstone herd was worked up during the winter. Other activities of the Buffalo Ranch consisted of feeding, caring for the buffalo herd, maintenance of buildings, corrals and machinery, and irrigation and management of hay lands. During January and February 165 head of surplus buffalo were slaughtered and the meat distributed to various Indian agencies in Montana and Wyoming. Twelve were shipped alive.

One hundred and twenty-one tons of hay were fed to the buffalo this year as compared with 314 tons of hay and 20 tons of cottonseed cake for last year.

The light, open winter enabled the major portion of the herd to find sufficient food for maintenance without concentrating on the feeding ground at the ranch. About 300 head of buffalo successfully wintered in Pelican Creek Valley.

Hay Ranches: The following table shows the amount of hay fed at the various hay ranches as compared with last year:

<u>Slough Creek</u>		<u>Gardiner</u>		<u>Game Ranch</u>	
1932-33	1933-34	1932-33	1933-34	1932-33	1933-
334 T	48 T	6 T	0	36 T	0

The majority of game animals were able to find sufficient natural subsistence without relying upon food on the feeding bounds. Consequently there was a considerable reduction in the amount of hay fed this year.



Predatory Animals: One hundred and eighty coyotes were killed this year as compared with 140 killed last year.

Wildlife in the Park: All game animals survived the winter in excellent condition. The few animals that dies, succumbed to old age rather than to exposure or lack of food. High precipitation during the month of June materially improved the range conditions on both the summer and winter ranges. The outlook for winter feed, for the coming winter is better than it has been for the past two or three years. However, in spite of the record high precipitation for June the average precipitation is still below normal and this, coupled with the heavy overgrazing on the winter range, which has caused serious depletion, will require stringent measures to bring about proper rehabilitation.

Bears, Black: Black bears were late in coming into the feeding grounds and utility areas having emerged from their hibernation about a month earlier than usual and scattering out farther into the forest. Only a few of these animals were seen by park visitors up until June 30. Only four bear damages were reported for the period October 1, 1933 to June 30, 1934, as compared with 22 damages and injuries for the same period last year.

Bears, Grizzly: Grizzly bears, like the black bears, were also slow in coming to the feeding grounds. Due to the road repairs and construction, the Canyon feeding ground has not been opened but is expected to be in use within 10 to 15 days. The only other feeding ground being used this year is the Old Faithful "Lunch Counter" where one or two grizzly bears have been seen nightly.

Other Animals: Beaver, snowshoe rabbits and marmots have been seen over the entire park and have been a source of entertainment and interest to park visitors. Other small animals, including marten, otter, mink, etc., are seldom seen by park visitors, but those seen by rangers on patrol indicate a slight yearly increase.

One game count was made this year. The following table shows the counts and estimates of game animals:

	:Actual Count :		Estimated :		Increase :		Condition	
	: 1933:	1934 :	:1933:	1934 :	:1933:	1934:	: 1933 :	1934
Antelope	: 599:	321 :	: 700:	700:	Yes :	? :	Good :	Excel
Buffalo	: *985:	#950 :	:1000:	950:	slaughtered		Excel :	Excel
Deer	: 396:		: 850:	850:	No :	No :	Poor :	Fair
Elk	: :10647 :		: :		:	:	:	
Northern Herd:	11521:		:2500:	13000:	? :	Yes :	Fair :	Good
Gallatin Herd:	1822:	1053 :	:2450:	2000:	No :	? :	Fair :	Good
Interior Park:	448:	No count	:600:	600:	? :	No :	Fair :	Good
Moose	: 71:	" :	: 700:	700:	? :	Yes :	Good :	Good
Sheep	: 82:	125 :	: 150:	150:	? :	Yes :	Fair :	Good
Bears, Grizzly :	125:		: 260:		Yes :	? :	Excel :	Excel
" Black :	323:		: 525:		Yes :	? :	Excel :	Excel

\* Does not include 3 shipped and 202 slaughtered

# Does not include 12 shipped and 165 slaughtered nor this year's calf crop.

Waterfowl: Observations and counts of trumpeter swan show an increase over last year. Large numbers of ducks and gees were observed during the fall of the year on all the lakes and streams. More than the usual number of waterfowl were observed in the park during the winter. Many of the streams and small lakes which ordinarily freeze over during the winter were open this year and provided an excellent winter habitat for these birds.

Fish Planting: The collection of black-spotted trout eggs at Yellowstone Park hatchery, operated by the US bureau of Fisheries under the direction of Supervisor Fred J. Foster, has amounted to 38,190,000 which number exceeds by some six million eggs the collection any other season of operation in Yellowstone Park. This is the sixth consecutive year that egg collections have increased over the previous season indicating that fishing conditions over the park and especially in Yellowstone Lake are improving annually. In addition to the black-spotted trout eggs 4,343,320 grayling eggs were also taken which number amounts to more than a 100% increase over last year's take. Both grayling and black-spotted trout eggs hatched excellently and equally as well as in previous seasons.

It has been the practice to divide the eggs taken in Yellowstone National Park between the Bureau of Fisheries and the National Park Service, the National Park Service receiving one half of all eggs collected. Of the 17,397,500 black-spotted eggs assigned to the Park Service 800,000 were sent to Idaho hatcheries to be hatched on share for the Bechler River, 1,000,000 to Teton Park, 1,700,000 to Glacier Park, 1,250,000 to Bozeman hatchery for West side waters, 300,000 to Mt. Rainier Park, and 12,379,190 held in Yellowstone for distribution here. Of the Bureau of Fisheries' share, 17,365,810 eggs were shipped out of the park. Of the 4,343,320 grayling eggs eyed, 3,048,320 were



planted in Yellowstone, 500,000 shipped to Glacier Park, and 145,000 shipped out of the park by the Bureau of Fisheries.

In addition to the plants made in Yellowstone from the eggs hatched here there were received and planted 350,000 rainbow fry from the Bit Timer, Montana hatchery; 229,150 rainbow fry from the Anaconda hatchery, 37,500 #3 rainbow from the Boxeman, Montana hatchery; 8,710 eastern brook trout #3 from the Boxeman and 208,000 lock leven from the Bozeman hatchery.

The rearing pools at Mammoth were not operated this year due mainly to the unsuitability of the water supply, which annually has caused considerable loss and difficulty with a bacterial disease known as fin rot, one of the most difficult to control of all fish diseases.

Dr. John W. Scott, Professor of Zoology, Wyoming University, has continued his study of fish parasites in Yellowstone Park.

Fishermen are having good luck this year as shown by the fact that the number of fish reported as caught by park visitors to date amounts to 36,427 as compared with 18,394 last year.

#### ENGINEERING DEPARTMENT

Engineering activities are carried on under the direction of Park Engineer C. A. Lord and include the direction and supervision of road and trail maintenance, surveys, plans and construction engineering on roads and trails built as force account projects, engineering supervision of physical improvements and any general engineering assistance requested by other departments.

Road maintenance activities cover 361 miles of highway, 310 miles of which are within the park boundaries, 24 miles in the east approach road through the Shoshone National Forest and 27 miles of the south approach road between Moran and the south boundary. Work under this item is carried on from 15 camps established and maintained at central points during the travel season. All section crews are equipped with motorized equipment suitable to the class of maintenance to be done.

Since our last report, 25 miles of the main highway system have been reconstructed to high type standards so far as grading is concerned and 22 miles additional surfaced with crushed rock.

Comparatively little force account construction was carried on with allotments from regular park appropriations, nearly all such work being financed from the Civil Works and Public Works emergency funds and reported elsewhere under the item of Emergency construction.

Post-construction maintenance was carried on over the Obsidian Cliff-Firehole Cascades and east entrance road sections, consisting mainly of the installation of drainage tile to carry off sub-surface drainage and provide an outlet for seepage waters. Approximately 1500

feet of tile was installed on the first mentioned section and 2700 feet on the east entrance road. This work was financed from the balance of the allotment set up the previous season.

Surfacing and oiling of the subsidiary road leading to Artist Point was completed, surfacing work consisting of the addition of fines to the crushed rock placed during the previous season. Oiling was the standard type of road mix job using about 12,000 gallons of asphaltic road oil to the mile and resulting in a three-inch oil mat.

Two major grading projects, the Tower Junction-Lava Creek section and the Terraces-Obsidian Cliff section, were accepted from the contractor and placed under post-construction maintenance with Park Service forces and equipment. This work involved spot surfacing with select material, roadside cleanup, palliative oiling and the installation of approximately 500 lineal feet of drainage tile.

#### Emergency Construction:

Public Works Program: Allotments covering the Public Works program were made available on August 19 too late to get the full program under way during the 1933 season. However, 12 projects were at and several of them completed before the close of the fiscal year.

Considerable improvement was made on the 10 mile section of the road between Lake and West Thumb, known as the Lake Shore road. One half mile of drainage tile was installed, steep shoulder slopes flattened to prevent erosion and sever sand pockets in the roadbed stabilized, by the addition of clay binder.

That section of the subsidiary road leading to Inspiration Point west of Grand View was surfaced and given a palliative oil treatment. The section was regraded and curves built up to standard super-elevation. Following fine grading a six-inch course of loose crushed rock was spread and compacted and sufficient road oil applied to form a dust palliative and prevent loss of fines and erosion from storms.

The West Gallatin section was given a seal coat treatment for protection of the oil mat surface laid down during the previous season. One eight gallon of naphtha cutback asphalt per square yard was applied with pressure distributor, completely sealing the cracks and striations against moisture seepage.

At Artist Point the parking area graded under the construction contract and surfaced as a minor force account project was improved by the construction of a masonry curb and the application of a three-quarter armor coat, or wearing surface, using crushed rock and emulsified asphalt binder.

Construction of permanent hard surfaced footpaths serving the Old Faithful thermal area was continued, the work consisting of the building of a section of trail near Grand Geyser and the construction of two bridges over the Firehole River, one near Inkwell Springs and



the second in the Biscuit Basin area.

The trail leading to the headwaters of the Lamar River was improved by relocation and regrading and the erection of several bridges. Now construction extended this trail about eight miles above its original terminus.

A new standard four horse barn was constructed at the administrative area at Soda Butte. The new building is of combination log and frame construction conforming to the type of architecture of the ranger station erected two years ago.

Two standard snowshoe cabins were erected in the Lamar district and near the north boundary. This project was contracted but erected under the Park Service supervision.

Three comfort stations were erected at the Fishing Bridge area; two being let to contract for the erection of the building proper with the installation of sewer and water facilities performed as force account by the Park Service. The third building was erected entirely by the Park Service.

A water system was installed at West Yellowstone, principally for service to the newly completed ranger station and administrative building, but also with the idea of eventual service to the public auto camp in that area. The structure housing the pumping unit and pressure tank was let to contract but all other work was carried on as force account.

The Mammoth water system was improved and increased by the addition of water from the Indian Creek watershed. This improvement involved the construction of a log and timber diversion dam and an earth canal, approximately a mile in length, to carry the additional water to the present headworks on Panther Creek and the Gardiner River.

An extensive program of reconditioning old buildings for the elimination of fire hazards was carried out at the headquarters area at Mammoth. All chimneys and flues were either repaired or rebuilt as their condition appeared to warrant and a many construction conditions not conforming to the underwriters' code were corrected.

#### SANITATION DEPARTMENT

This work is carried on under the supervision of H. B. Hommon the US Public Health Service and under the direct charge of William Wiggins, Master Plumber. Mr. Hommon made a thorough inspection of our entire operations during the latter part of July and outlined necessary corrective measures. Mr. Wiggins makes regular sanitary inspections as outlined by Mr. Hommon.

The following work was accomplished: West Entrance PWA project constructing one complete sewer system and one water system with deep well gasoline operated pump and two 2,000 gallon underground storage tanks. Constructing two leaching cesspools for Canyon and Old Faithful mess houses: Operating and maintaining two refrigerating plants: Installed two complete plumbing systems in the west entrance ranger station.

CWA work at Mammoth consisted of installing 2000 feet of 10-inch fire main and building 1200 feet of filter trench for the sewer system.

PWA projects at Mammoth consisted of installing complete oil-burning unit in the administration building: Installing 48 radiator in the barracks building, to take the place of wood stoves: Moving residence building to make room for the construction of the new apartment house. The first work was done under Account #349 - Elimination of Fire Hazards.

One comfort station at the Fishing Bridge Auto Camp was completed and installation was started of 8,000 feet of six-inch water main.

One vacuum type chlorine machine was purchased and installed for the Lake sewer system.

In addition 24 water systems, 32 sewer systems and 5 incinerators were operated and maintained. The sixth incinerator, located at Thumb was not operated, due to lack of funds. Many campgrounds and parking areas in the park were also operated and maintained by this department. The heating systems at Mammoth, including 14 steam boilers were also operated and maintained by this department. The tinsmith in this department is also an important item as there are a great number of sheet metal roofs, ice boxes and stoves to maintain.

#### ELECTRICAL DEPARTMENT

The following table shows total production of power plant and distribution of current for the period October 1, 1933 to June 30, 1934 compared with similar data for the fiscal year 1933:

	F.Y. 1933	October 1, 1933 June 30, 1934
Sold to Park Operators	44,565	15,398
Street lighting	51,280	22,080
Used by Govt. bldgs. for light and power	690,074	565,935
Total production	765,919	603,413

Several old buildings at Mammoth were rewired last winter on Project FP 349 - Elimination of Fire Hazards.

Three miles of cedar pole telephone line was built from the main



highway to Blacktail Deer Creek cabin on the Yellowstone River to serve the snowshoe cabin during the winter.

Approximately 10 miles of one-wire grounded telephone line was built from the main highway at the east entrance to Pelican snowshoe cabin. This line was built by ECW labor using native poles.

We now have 394 miles of metallic circuit, 16½ miles of grounded circuit and there are 231 telephones connected.

One 50-watt low wave broadcasting and receiving station was installed at Mammoth and one 10-watt low wave broadcasting and receiving station installed at Lake besides six semi-portable sets to be used at various other points in the park and at fires.

### BUILDING MAINTENANCE AND CONSTRUCTION

All carpenter work is under the general supervision of Master Carpenter T. A. Bowman and painting under the supervision of Master Painter L. N. Tompkins.

During the past year regular maintenance accomplished by the carpenter consisted of building reconditioning, including the Old Faithful ranger station, the small apartment house at Old Faithful, a porch and cellar entrance at West Yellowstone ranger station, converting one of the large houses at headquarters into a duplex, and other general maintenance work.

A crew of four carpenters in addition to the master carpenter was employed during the early part of this year..

The master painter's work consisted of painting and staining buildings; papering and placing signs, of which there are more than 2000. Building No. 24 was moved and remodeled. This was necessary because of the fact that it occupied the site of the proposed apartment house. Several buildings at headquarters received minor paint jobs.

The master painter worked alone until late in June when additional help was necessary.

### MECHANICAL DEPARTMENT

This department is in charge of Master Mechanic Robert R. Robinson and includes six permanent mechanics, one permanent handyman mechanic, one blacksmith, two temporary handymen mechanics and one temporary blacksmith.

Duties of the above are the maintenance, repair and overhaul of all motorized equipment in addition to several hundred axes, shovels, saws, picks, and bars that are reconditioned each year.

New equipment purchased included eight one-half ton pickups, one concrete mixer, one 50 hp caterpillar tractor and various small tools.

A night shift consisting of two mechanics was started on June 1. This was a great help in taking care of car washing and greasing with no delay in time when cars were unable to come into the garage during the day time.

### EMERGENCY CONSERVATION WORK

This year we were allowed six camps, which is an addition of two more than for last year. The new camps are Camp #5, Old Faithful (Near Perce Creek) and Camp #6, Snake River. The first two companies arrived May 4, two on May 15 and two on May 25.

Projects are progressing much more rapidly this year than in 1933 due to the higher type of enrollees and the experienced supervisory personnel of both the Army and the Park Service.

The morale of the enrolled men this year is excellent. They have been subject to some trying conditions and almost without exception worked without complaining.

Because of the shortage of trucks for transportation, we have been unable to work some of the first projects as they are listed in the plans. This situation was met by working all projects that were near the main camps and consequently the work program as a whole has not been held back appreciably. Our rented equipment has thus far proven very unsatisfactory. This is because of the exorbitant price we have had to pay and because of the poor condition of the trucks. To keep down expenses trucks have been rented without drivers which has placed considerable responsibility on the government and has resulted in some minor misunderstandings. Since we were able to keep the men at the camps employed without the services of additional trucks no more than three rented trucks have been used at one time and these will probably be released early in July.

By the end of June two side camps had been established; one on the Southeast Arm of Yellowstone Lake, to complete a warehouse and dock that had been started in 1933; the other near the Bechler River ranger station for the purpose of constructing a telephone line to the Boundary Creek patrol cabin.

There is located at each camp an educational advisor and they are aiding considerably in organizing talks, programs, educational trips, athletics. A regular schedule of weekly talks has been arranged by the ranger force and the park naturalist.



## CIVIL WORKS PROGRAM

The Civil Works program was commenced on December 15, 1933 and effectively continued until April 19, 1934, the closing date of all federal Civil Works projects.

Personnel for this program was obtained from the Montana and Wyoming reemployment offices, an equal quota of men being obtained from each state. Ten days after opening of the program 225 men were at work on 20 different projects. This force was employed for the first 90 days after which time it was gradually reduced 11% a week. A good type of labor was secured for the most part. Accidents were not serious and very few. Equipment furnished by the National Park and hauling the necessary materials and supplies, though cost for maintenance was borne for the most part by the program. A minimum of expenditures were made for equipment and supplies as requested by Administrator Hopkins. A small gas shovel was also furnished by for a short time to excavate top soil for the Mammoth landscaping projects and the Mammoth auto camp improvement.

All projects were located within ten miles of Mammoth, the base camp. Housing facilities were obtained by remodeling the present stone barracks which, with the old bunk houses, accommodated the large force. Two settings at the mess were required during the first part of the program until the storage room was converted into an auxiliary dining and mess hall. Two spike camps were established for a short period due to the inaccessibility of the projects to motor vehicles. One camp was established at Lower Blacktail Deer Creek on the Yellowstone River and one for trail construction about four miles up the Yellowstone River from Gardiner; the latter camp relieving the congestion in Mammoth somewhat. Performance from both camp spike for the entire program was very satisfactory. The camp near Gardiner was a permanent tent camp which was established to accommodate 50 men or more with all necessary materials and supplies packed in. Weather condition at that season of the year were ideal for working a large camp of men.

The program called for two water and sewer projects, six landscaping, five road and trail, three building and four miscellaneous projects. Twenty worthwhile projects were carried on under this program that could not have been done from regular park funds. Two projects that were originally scheduled were not started due to their inaccessibility and weather conditions. All other projects were practically completed.

Four accountants and clerks were employed in cooperation with the regular park administrative force. All projects were supervised by the interested department heads with the active cooperation of the engineering department under Mr. Lord.

A total of 12,506 man days, totaling an expenditure of \$70,402, were worked during the program.

Accomplishments during the program were entirely satisfactory and all projects were very much needed in view of the existing economy program for regular park work.

### PARK OPERATORS

The unexpected large increase in travel was reflected in increased business for the operators. By the end of June the percentage of increase of all operators was practically the same percentage of increase as the travel. The poor season of 1933 caused the operators to refrain from making any material changes in their operations for facilities although some minor changes were made by the various operators follows:

Yellowstone Park Hotel Company: The maintenance work of the carpenters and painters were carried on as usual.

Yellowstone Park Lodge & Camps Company: Improvements consist of installing 300 feet of new six-inch pipe line into the Mammoth plunge and other improvements in the water system. Painting of cabin floors, furniture and the inside of washrooms and toilet buildings was carried on in the various housekeeping cabin units as well as some of the cabins in the various lodges. It was necessary to remove a many trees around the housekeeping areas that were blown down by heavy winds. A small building was constructed at Canyon Lodge for the housing of the chlorinating machine to be used at that location.

C. A. Hamilton: The Old Faithful swimming pool, purchased by C. A. Hamilton last year from Mr. H. P. Brothers, was remodeled and was ready for use when the first park visitors arrived. The swimming pool has proven very popular. It is enclosed and affords comfortable bathing both day and night.

Pryor and Trischman: Minor improvements were made at the Canyon store, both exterior and interior, including the installation of electric refrigeration. A small dance floor was installed at the Mammoth coffee shop but this will not be used unless approval is received from the Director for permitting dancing at this location.

Haynes Picture Shops, Inc.: At Mammoth minor changes were made in the shop in the automobile campground, including removing partitions, re-arranging windows and doors, adding rear porch and door, completely redecorationing both inside and outside, and repainting the exterior of the residence building, repairing and repainting roof and remodeling inside thereof. At the headquarters building at



Mammoth, the main shop was repainted and some remodeling was done inside. The inside of the shops at Old Faithful auto camp, Fishing Bridge, Canyon and Thumb auto camps were remodeled. Two especially designed photograph coping machines, one for Old Faithful and one for Mammoth, were added to the equipment items.

Yellowstone Park Transportation Company: The usual painting and repair work on park buses and trucks and other properties has been continued.

Yellowstone Park Boat Company: Two small speed boats and four Mullins steel rowboats designed for outboard motors were purchased. The usual repairing and painting of boats were carried on and a small addition made to the table on Stevenson Island. It is contemplated to place a roof over this table.

Yellowstone Park Fuel Company: At old Faithful, Fishing Bridge and Canyon small tents or cabins were erected as sleeping quarters for the attendants, thus enabling many customers to be served after closing hours. New tarpaulin tops were installed on the wood piles at Fishing Bridge and Canyon. Bundles have been enlarged to 16" in diameter.

#### COOPERATING BUREAUS

The Bureau of Public Roads, the US Public Health Service, Bureau of Entomology, Bureau of Fisheries, Weather Bureau, Forest Service and War Department have all cooperated to the fullest extent with officials of the National Park Service in Yellowstone Park during the year just closed.

Postoffice: Business has increased over last year by almost exactly 100%. This includes both summer and winter business, the winter having been increased by the fact that there were more workmen in the park than usual and that the working season began so much earlier in the spring.

Assistant Postmaster Clifford C. Marsh was retired for age on April 1, 1934. His vacancy has not been filled, since the receipts of the office for the past year do not justify the services of an assistant postmaster under the present policy of the department. In the winter a considerable saving can be made by employment of temporary clerks by the hour instead of having a regular clerk or assistant postmaster.

Postmaster C. A. Lindley was reappointed effective May 7, 1934.

Bureau of Public Roads: The major highway work in the park under the supervision of the Bureau of Public Roads during the past year has consisted chiefly of getting the approximately three-million

dollar Recovery program underway, all of which is now contracted except for a few small bridge contracts. The total work underway at this time includes about 75 miles of grading, 25 miles of base course surfacing, and several major structures.

All of the work now under way should be completed during 1935, and in following the procedure of concentrating improvement on the grand loop route and the poorest sections of entrance roads, the end of the 1935 season should find most of the grand loop graded, except the one section from Old Faithful to West Thumb and parts of it surfaced and oiled, together with completed grading on both the east and south entrance roads.

The northeast entrance from Cooke City to Tower Junction is also under grading construction for about half its length on the Cooke City end, and plans for the completion of the grading are ready to contract as soon as additional funds are available.

Emergency construction projects which were completed during the past year, include the grading on one mile through the Golden Gate and the viaduct widening, also the base course surfacing of 20 miles from Canyon Junction to Tower Junction on the grand loop. One Recovery project, the surfacing of 12 miles from Mammoth to Obsidian Cliff has just been finished and another, the slide removal at Overhanging Cliff is about to be completed.

Weather Bureau: A period of 10 months is covered by the present report. The last previous weather summary for the superintendent's annual report included 12 months ending at the close of August, 1933. We now summarize weather conditions from that time to the end of the fiscal year, June 30, 1934.

This highly interesting period has been most conspicuously marked by a winter of extraordinary mildness and, except in the terminal months, by a continuously mounting deficiency in precipitation.

September, though without notably cold weather, averaged nearly two degrees per day below normal. The first frost of the fall season was a killing frost on September 19. The first fall of a measurable amount of snow occurred during the night of September 24-25, 5.5 inches being recorded. September's precipitation totaled 1.73 inches, or .4 inch more than normal.

From October to May, inclusive, each month of the eight displayed a very strong plus departure from normal temperature. Five of those months, October, December, January, February and May, established new high records for mean temperature, and daily mean temperatures for the eight months were on the average, 7.2 degrees per day above normal. The winter was much the warmest on record at this place. From October 1 to April 30 daily mean temperatures averaged 34.8 degrees. This was



5.1 degrees warmer than the second warmest similar period, which was that of 1901-1902. The latter period is rather closely approached by several others. While mean temperatures were high during the time we are now considering, the records of extremes have called for no revision. A temperature as high as 80.0 degrees was registered on but one day, May 28, when 82 was observed. Temperatures a fraction under 80.0, but recorded to whole numbers as 80, occurred once in September and once in June. Winter's lowest temperature was -5 degrees on February 25. There were 178 days when minimum temperatures were 32.0 degrees or lower, and three with zero or lower. June interrupted this succession of warm months with a mean temperature of 53.8 degrees, which was nearly a degree a day below May's, and 2.2 degrees below normal. The last freezing temperature and killing frost occurred on June 9.

The eight warm months were deficient in precipitation to the extent of 6.59 inches. The total precipitation for the entire 10 months was 11.11 inches, which was 4.57 inches less than normal. The total snowfall was 51.7 inches, a little more than half normal. A fall of 4.0 inches on December 25 was the heaviest 24-hour snowfall of the season, while the greatest average depth of snow on the ground was 6.0 inches on December 25 and 26. September, December and June exceeded the normal amount of snow, but the June normal is less than an inch and the September normal less than two inches. Precipitation amounting to 0.01 inch or more fell on 89 days. June, with its coolness was also remarkable for its heavy precipitation. A total of 3.48 inches was caught by the rain gauge. This was nearly one-fifth of an inch greater than any preceding June total, and stands out sharply in comparison with May's 0.42 inch, the lowest on record for that month. The greater 24-hour precipitation of the whole 10 months was 1.6 inches, occurring on June 6-7.

All these months, except September, December and June, had higher percentages of sunshine than the corresponding months one year earlier. Relative humidity was lower than a year earlier in October, March, April and May and higher in June and November. In September it was lower in the early morning, and higher at noon and in the evening. In December it was lower in the morning and evening and higher at noon. In January and February it was higher in the morning and lower at noon and in the evening. Light fog was observed on February 23 and June 7. There was no dense fog. Thunderstorms occurred on 25 days.

Southwest was the prevailing wind direction each month. The average velocity for the whole period was 8.8 miles per hour. December's average of 11.8 miles per hour was higher than that of any other month of any name in the records. The highest velocity for a five-minute period was 40 miles per hour (from southwest) on September 22 and June 18. A velocity as high as this does not appear previously in September records.

## MISCELLANEOUS

Vital Statistics: There was one death, due to accidents, 1 birth and 8 marriages.

Deaths: Hon. J. B. Kendrick, United States Senator from Wyoming, died in Sheridan, Wyoming on November 3, 1933. Senator Kendrick was one of the most beloved members of Congress and served his state in the Senate from 1917 until his death. He was a very fine friend of the Yellowstone and Grand Teton National Parks and aided materially in the passage of legislation affecting these two parks.

Judge George A. Horkan of Bozeman Montana, died in Sheridan, Wyoming on the same day that Senator Kendrick passed away. Judge Horkan was formerly State Commander of the American Legion for Montana and the father of Miriam Horkan, former park clerk. He was keenly interested in problems affecting the park.

Mrs. Robert C. Reamer, wife of the architect who designed the Old Faithful Inn and Canyon Hotel, died in Seattle, Washington on December 22, 1933. Mrs. Reamer is the niece of US Commissioner John W. Meldrum.

General Hugh L. Scott, USA (Retired) died at Walter Reed Hospital, Washington DC on April 29, 1934 at the age of 80. General Scott engaged in the Nez Perce raid through Yellowstone Park in 1877. He made several trips to the Yellowstone following his retirement. General Scott was regarded as the best white exponent of the sign language.

William C. Corey, former president of the U. S. Steel Corporation, died in New York City on May 11, 1934 at the age of 68. Mr. Corey donated \$15,000 toward the construction of the Yellowstone Lake Fish Hatchery.

D. S. Spencer of Salt Lake City, retired General Passenger Agent for the Union Pacific System, died in Salt Lake on June 26, 1934. "Uncle Dan" as he was known to everyone, was one of the most enthusiastic park boosters and was responsible for directing much travel to the Yellowstone.

Visitors: The list of distinguished visitors is necessarily small in this report because of the fact that it covers the period from October to June only and does not take in much of the regular park season. Among late visitors following the close of the 1933 season were Dr. Jan Hofman, Dean for Preservation of Historical Monuments of History Faculty at Comenius University at Bratislava, Czechoslovakia, who arrived on October 11 and a party of Northern Pacific officials who arrived on November 14. This party included Charles Donnelly, President: J. M. Hannaford, Director and former



President; H. E. Stevens and James Woodworth, Vice Presidents; and T. F. Lowry, Assistant General Manager.

Arrivals in April included Mr. and Mrs. Randolph Blinn, prominent newspaper and magazine writers of New York City and Dr. A. M. Bosman, Dean of the College of Agriculture, University of Pretoria, South Africa and Mrs. Boxman.

Among the prominent visitors in May and June were Bernard Blum, Chief Engineer, Northern Pacific Railway; James Derrig, Assistant Engineer; Governor Frank M. Cooney of Montana; General Frank McCoy, USA; F. W. Isaac, Endeavour, Kenyon Colony, British East Africa, explorer and naturalist; Nils G. Skield, Director, Swedish Technical Museum, Norrköping Sweden; Henry B. Joy, former president of the Packard Motor Company and Good Roads booster; Miss Charl Williams Field Secretary, National Educational Association and Vice President, Business and Professional Womens Clubs. Professor Franz Heske, German forester of international reputation, Tharandt, Germany; Commander Riley F. McConnell, USN; D. Dem. Dimanesco, Attache from Roumania; Mrs. Raymond Moley, wife of Professor Moley, former Assistant Secretary of State; Judges G. T. McDermott of Kansas and O. L. Phillips of Denver, US Circuit Court of Appeals; US Senator Clarence C. Dill of Washington; Mrs. M. A. Houck, prominent Washington society woman; F. Martin Brown, Director Colorado Biological Survey; George C. McManus, famous cartoonist; Watson Davis, Editor of Science Service; and US Congressman John H. Hoeppe of California. The two western regions of the Business and Professional Womens Clubs held their convention at the Canyon Hotel on June 18 and 19. The Pi Beta Phi Sorority held its convention at Old Faithful from June 24 to 30.















Bound by the Western Museum Laboratories at Berkeley.

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